

Improvements in or relating to ceramic materials

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Abstract

A ceramic dielectric material comprising barium titanate and a significant quantity of manganous oxide is fired in a mixture of a reducing atmosphere and an oxidising atmosphere. The preferred atmosphere comprises a mixture of hydrogen, nitrogen and oxygen or air and this mixture is introduced into the sintering furnace before the sintering zone in sufficient quantity for the oxygen to combine with some but not all of the hydrogen. A preferred ceramic composition sintered in this atmosphere consists of 43,6% mol barium oxide, 44,5% mol titanium dioxide, 2,0% mol manganese oxide, 9,8% mol magnesium oxide and 0,1% mol thorium oxide. A preferred gas composition after all the oxygen has combined with the hydrogen is 2% hydrogen, 4% water vapour and 94% nitrogen by volume and the amount of oxygen introduced with the gas should exceed 0,5% by volume of the mixture. A sintering temperature of up to 1350 DEG C. can be used with the preferred atmosphere. Specifications 809,439 and 835,961 are referred to.

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